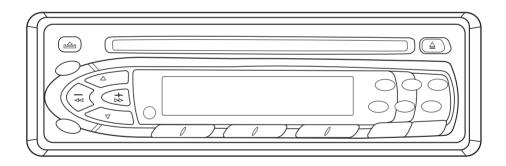


OWNER'S MANUAL

VBD 300



PLL SYNTHESIZER STEREO RADIO WITH COMPACT DISC PLAYER DIGITAL

INSTALLATION

Notes:

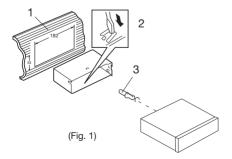
- Choose the mounting location where the unit will not interfere with the normal driving function of the driver.
- Before finally installing the unit, connect the wiring temporarily and make sure it is all connected up properly and the unit and the system work properly.
- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- Install the unit where it does not get in the driver's way and cannot injure the passenger if there is a sudden stop, like an emergency stop.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.
- Avoid installing the unit where it would be subject to high temperature, such as from direct sunlight, or from hot air, from the heater, or where it would be subject to dust, dirt or excessive vibration

DIN FRONT/REAR-MOUNT

This unit can be properly installed either from "Front" (conventional DIN Front-mount) or "Rear" (DIN Rear-mount installation, utilizing threaded screw holes at the sides of the unit chassis). For details, refer to the following illustrated installation methods.

DIN FRONT-MOUNT (Method A)

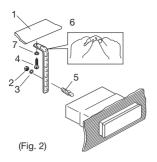
Installation the unit



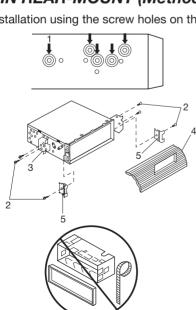
- 1 Dashboard
- 2. Holder

After inserting the holder into the dashboard, select the appropriate tab according to the thickness of the dashboard material and bend them inwards to secure the holder in place.

3. Screw



Removing the unit



- 1 Dashboard
- 2. Nut (5mm)
- 3. Spring washer
- 4. Screw (5 x 25mm)
- 5. Screw
- 6. Strap

Be sure to use the strap to secure the back of the unit in place. The strap can be bent by hand to the desired angle.

- 7. Plain washer
- 1 Frame
- 2. Insert fingers into the groove in the front of frame and pull out to remove the frame. (When reattaching the frame, point the side with a groove downwards and attach it.)
- Lever

Insert the levers supplied with the unit into the grooves at both sides of the unit as shown in figure until they click. Pulling the levers makes it possible to remove the unit from the dashboard

DIN REAR-MOUNT (Method B)

Installation using the screw holes on the sides of the unit.

Fastening the unit to the factory radio mounting bracket.

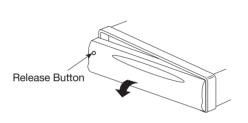
- 1. Select a position where the screw holes of the bracket and the screw holes of the main unit become aligned (are fitted), and tighten the screws at 2 places on each side.
 - Use either truss screws (5 x 6mm) or flush surface screws (4 x 6mm), depending on the shape of the screw holes in the bracket.
- 2 Screw
- 3. Factory radio mounting bracket
- 4. Dashboard or Console
- 5. Hook (Remove this part)

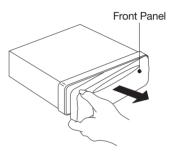
Note: The mounting box, outer trim ring, and half-sleeve are not used for method B installation.

HOW TO REMOVE AND INSTALL THE FRONT PANEL (OPTIONAL)

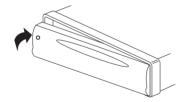
- Press the release button and pull-off the front panel. Keep front panel into the case.
- 2. To install the front panel, insert the panel into the housing and make sure the panel is properly installed, otherwise, abnormalities occurs on the display or some keys will not function properly.

REMOVING THE FRONT PANEL



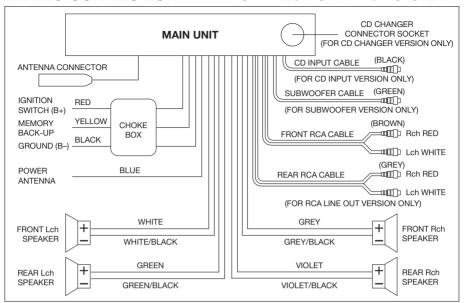


INSTALLING THE FRONT PANEL



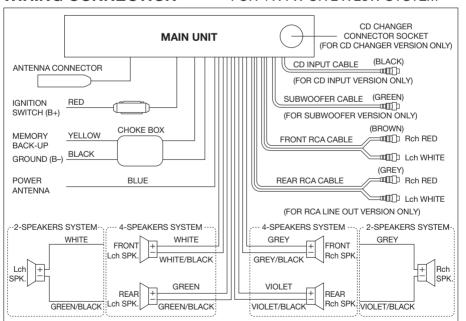
WIRING CONNECTION

FOR 4 X 25W OR 4 X 40W SYSTEM



WIRING CONNECTION

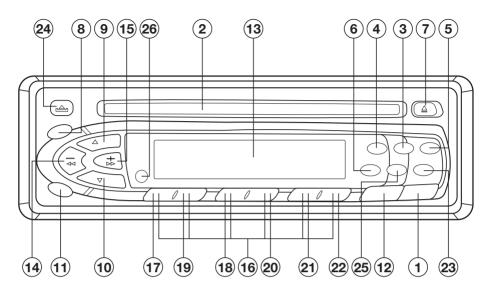
FOR 4 X 7W OR 2 X 25W SYSTEM

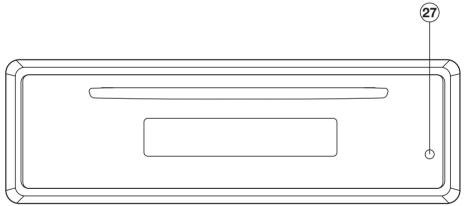


Note:

- For 2-speakers system, green, violet, white/black and grey/black wire leads are unconnected and isolated.
- 2. For 2-speakers system, keep the fader indicator at center position to maintain the existing volume level.

LOCATION AND FUNCTION OF CONTROLS





(1) ON/OFF

Press **POWER** button (1) to turn on. Press it again to turn it off. If the power is off, press **BND** button (11) or **MOD** button (12) also can turn on the unit.

(2) DISC PLAY

Gently insert a compact disc with the label side facing up into the disc slot (2). The disc is then automatically loaded into the unit and starts playing with the first track of the disc. The digital display will indicate the track number.

(3) MUTE

Press the **MUT** button (3) to silence the receiver. Press again to resume listening.

(4) MONO/STEREO (FOR MON VERSION ONLY)

Press **MON** button (4) to select monaural or stereo (Mono reception for radio stations). You can sometimes improve reception of distant stations by selecting mono operation.

(4) SUB-WOOFER (FOR SUB.W. VERSION ONLY)

Press **X-BAS** button (4) to toggle sub-woofer output, when sub-woofer on, display will show "(**SW**".

(5) LOUDNESS

Press **LOU** button (5) to increase bass output and display will show "**LOUD**".

(6) SET THE CLOCK

Press and hold the **DSP** button (6), then press the $+/\gg$ (15) to change minutes or \ll /- (14) to change hours.

(7) EJECT

Push a CD into slot. The CD will begin to play. Press ≜ (eject) button (7) to stop CD play and eject CD from slot. Receiver switches to radio operation.

(8, 9 & 10) SELECT MODE

Press **SEL** button (8) to move display through bass, treble, balance, fader and volume functions. Use \triangle (9) and ∇ (10) buttons to adjust the selected mode. When mode has not been adjusted for several seconds, display returns to normal radio or CD display.

Bass

Press **SEL** button (8) for one time. Adjust bass level using \triangle (9) and ∇ (10) buttons.

Treble

Press **SEL** button (8) for two times. Adjust treble level using \triangle (9) and ∇ (10) buttons.

Balance

Press **SEL** button (8) for three times. Adjust sound balance between left and right speakers using \triangle (9) and ∇ (10) buttons.

Fader

Press **SEL** button (8) for four times. Adjust sound balance between front and rear speakers using \triangle (9) and ∇ (10) buttons.

Volume

Press **SEL** button (8) for five times. Adjust volume level using \triangle (9) and ∇ (10) buttons.

(11) BAND

Press **BND** button (11) to change between three FM bands and two AM bands and one LW band. Each band stores up to six preset stations.



(12) SELECT LISTENING MODE

Press MOD button (12) to choose desired listening mode.

(e.g. radio mode to CD mode to CDC mode).

[(e.g. radio mode to CD mode to to AUX (Line)]

(13) LIQUID CRYSTAL DISPLAY

The **LCD** (13) can show the current state of the unit.

(14 & 15) SELECT STATIONS

Press and release a **TUNE/SEEK/TRACK** button ⋈ /- (14) or +/ ⋈ (15) immediately to move radio frequency number up or down on step.

Press and hold a **TUNE/SEEK/TRACK** button ⊲ /- (14) or +/ ⊳ (15) for several seconds to seek the next clear station.

(14 & 15) SKIP TRACKS

Press a **TUNE/SEEK/TRACK** button $\triangleleft \neg$ (14) or $+/ \triangleright \triangleright$ (15) to move to the previous track or the following track. Track number shows on the display.

(14 & 15) FAST FORWARD AND FAST REVERSE

Press a **TUNE/SEEK/TRACK** button ⊲ /- (14) or +/ ⊳ (15) to fast reverse or fast forward. CD play starts from when you release the button.

(16) PRESET STATIONS

Six number buttons (16) store and recall stations for each band.

Store a station:

Select a band (11) (if needed). Select a station. Hold a preset button for several seconds.

Recall a station:

Select a band (11) (if needed). Press a preset button to select stored station.

(17) TOP: PLAY THE FIRST TRACK

Press **TOP** button (17) to play the first track of the current disc.

(18) REPEAT THE SAME TRACK

During CD mode, press **RPT** button (18) to continuously repeat the same track. Press again to stop repeat.

During CDC mode, press **RPT** button (18) to continuously repeat the same track, press it again to continuously repeat all tracks on the current disc and press it at the third time to stop repeat.

(19) INTRO: PREVIEW ALL TRACKS

During CD mode, press **SCN** button (19) to play first several seconds of each track on the current disc. Press again to stop intro and listen to track.

During CDC mode, press **SCN** button (19) to play first several seconds of each track on the current disc. Press it again to play first several seconds of each track on all discs in the CD magazine. Press it at the third time to stop intro and listen to track.

(20) RANDOM: PLAY ALL TRACKS

During CD mode, press **RND** button (20) to play all tracks on CD in random. Press again to cancel the function.

During CDC mode, press **RND** button (20) to play all tracks on the current disc. Press it again to play all tracks on all discs in the CD magazine. Press it at the third time to cancel the function.

(21 & 22) SELECT DISC (FOR CD CHANGER VERSION ONLY)

During CDC mode, press **D.DN** button (21) to select previous disc and **D.UP** button (22) to select next disc.

ATTENTION: DURING CDC MODE, TURN OFF THE UNIT AND CHANGE THE DISC IN THE CD MAGAZINE, THEN TURN IT ON. IF THE UNIT CAN'T WORK WELL, PLEASE PRESS D.DN BUTTON (21) OR D.UP BUTTON (22) FOR ONE TIME.

(23) AUTOMATICALLY STORING & PROGRAM SCANNING

Automatically Storing

Press and hold **AMS** button (23) for several seconds to toggle automatically storing function. It starts searching next frequency in local mode and stores the clear station into the preset memory. If 6 ch. is not fully memorised, it would start the second searching in distance mode. At the end of automatically storing operation, mode is changed to Preset Scan.

Preset Scanning

Press **AMS** button (23) shortly to toggle preset scanning function. During the scanning, it will stop at every stored station for several seconds and the number of the channel being scanned flashes on the display. Press it again to stop scanning.

(24) FACEPLATE RELEASE

Press **RELEASE** button (24) to detach the removable faceplate.

(25) EQUALIZATION

Press **EQ** button (25) to turn on equalization function and to select desired audio mode. There are four kinds of mode as below:



(26) REMOTE SENSOR (OPTIONAL)

Point the remote handset to control the remote sensor (26). Press the function keys on the remote handset to control the system.

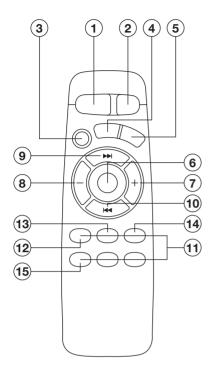
(27) RESET BUTTON FUNCTION

RESET button (27) is placed on the housing and must be activated with either a ball point pen or thin metal object. The reset button is to be activated for the following reasons:

- Initial installation of the unit when all wiring is completed.
- All the function buttons do not operate.
- Error symbol on the display.

Note: If press **RESET** button (27), the unit can't work yet, please use a cotton swab soaked in isopropyl alcohol to clean the socket on the back of the front panel.

Remote Control Handset



Control & Function Keys

1. POWER = Power ON/OFF Button

2. MOD = Mode Button3. SEL = Select Button

4. EQ = Equalization Button

5. BND = Band Select Button6. MUTE = Mute Button

7. VOL + = Volume Up Button 8. VOL - = Volume Down Button

9. TUN/SEK ► = Tune/Seek Up Button 10. TUN/SEK ► = Tune/Seek Down Button

= Random Button

11. PRESET = Preset Button
12. TOP = Top Button
13. SCN = Scanning Button
14. RPT = Repeat Button

15. RND

SPECIFICATION

GENERAL

Power Supply Requirements : DC 12 Volts, Negative Ground Chassis Dimensions : 178 (W) x 155 (D) x 50 (H)

Tone Controls

- Bass (at 100 Hz) : +10 dB / -10 dB - Treble (at 10 KHz) : +10 dB / -10 dB

Maximum Output Power

- Version v : 7W x 4 (ch) or 25W x 2 (ch)

- Version z : 25W x 4 (ch) - Version v : 40W x 4 (ch)

CD PLAYER

Signal to Noise Ratio : More than 60 dB Channel Separation : More than 60 dB Frequency Response : 20 Hz - 20 KHz

RADIO

		For 3 Bands (Europe) FM	For 2 Bands (Europe) FM	For 2 Bands (U.S.A.) FM
Frequency Coverage IF Sensitivity (S/N = 30 dB) Stereo Separation	:	87.5 to 108 MHz 10.7 MHz 3 μV > 30 dB	87.5 to 108 MHz 10.7 MHz 3 μV > 30 dB	87.5 to 107.9 MHz 10.7 MHz 3 μ V > 30 dB
		B #NA/	BANA/	A N.4

MW MW AM Frequency Coverage : 522 to 1620 KHz 522 to 1620 KHz 530 to 1710 KHz

IF : 450 KHz 450 KHz 450 KHz Sensitivity (S/N = 20 dB) : 32 dBu 32 dBu 32 dBu

LW

Frequency Coverage : 144 to 290 KHz

IF : 450 KHz

Sensitivity (S/N = 20 dB) : 35 dBu

TROUBLE SHOOTING

Before going through the check list, check wiring connection. If any of the problems persist after check list has been made, consult your nearest service dealer.

Symptom	Cause	Solution	
No power.	The car ignition is not on.	If the power supply is properly connected to the car accessory terminal, switch the ignition key to "ACC".	
	The fuse is blown.	Replace the fuse.	
Disc cannot be loaded or ejected.	Presence of CD disc inside the player.	Remove the disc in the player, then put a new one.	
	Inserting the disc in reverse direction.	Insert the compact disc with the label facing upward.	
	Compact disc is extremely dirty or defective disc.	Clean the disc or try to play a new one.	
	Temperature inside the car is too high.	Cool off or until the ambient temperature return to normal.	
	Condensation.	Leave the player to off for an hour or so, then try again.	
No sound.	Volume is in minimum.	Adjust volume to a desired level.	
	Wiring is not properly connected.	Check wiring connection.	
The operation keys do not work.	The built-in microcomputer is not operating properly due to noise.	Press the RESET button. Front panel is not properly fixed into its place.	
Sound skips.	The installation angle is not more than 30 degrees.	Adjust the installation angle to less than 30 degrees.	
	The disc is extremely dirty or defective disc.	Clean the compact disc. Then try to play a new one.	
The radio does not work. The radio station	The antenna cable is not connected.	Insert the antenna cable firmly.	
automatic selection does not work.	The signals are too weak.	Select a station manually.	